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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/619,203	03/21/96	KEENE D	CRUS-0045

LM02/0426

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EXAMINER	
NGUYEN, F	
ART UNIT	**PAPER NUMBER**
2774	21

DATE MAILED: 04/26/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/619,203	DAVID KEENE
Examiner	**Group Art Unit**
FRANCIS NGUYEN	2774

☒ Responsive to communication(s) filed on *Apr 6, 1999* .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-22* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-22* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 4/06/99 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/619,203 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 through 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hancock (U.S. Patent 5,604,514) in view of Munson et al.(U.S. Patent 5,699,277), further in view of Coelho et al.(U.S. Patent 5,666,137), and further in view of Selwan et al.(U.S.Patent 5,526,025).

4. In reference to **claims 1 through 22,** Hancock discloses a display controller and associated method (video display controller (32)) for receiving video data from a data bus (22) in a component YUV(YUV16) format and storing the video data(image pel) to a display memory(30) in pixel video format(YUV8/YUV16)(see figures 1, 2A, column 3, lines 15-17, lines 26-34, column 4, lines 23-27).

However, it fails to expressly teach a bus interface means coupled to the data bus. Munson et al discloses a bus interface means (PCI I/F (109) coupling to PCI bus (115)), PCI configuration registers, video capture registers for data processing, Register Programming Sequencer with address pointers, address working registers (see figures 4, 16, column 2, line 47-67, column 6, lines 18-24, lines 50-56, column 26, lines 36-55, column 27, lines 51-62). However, it fails to expressly teach a receiving method of video data in contiguous successive streams of luminance and chrominance difference data. Coelho et al. teaches a receiving method of video data in contiguous successive streams of luminance and chrominance difference data: an improved technique for formatting YUV9 subsampled data as known in the art(byte lane arrangement), wherein a frame buffer is divided into plural blocks for storing sequential packed video stream data(Y, U, V); a frame can be divided into 4x4 blocks(e.g. the screen comprising 30 bands 40 blocks wide is organized with 8 bits for U and 8 bits for V to provide color information for all 16 pixels in a block, yielding an average of one bit per pixel, thus YUV9) and the original full data Y,U, V values comprises (Y_{11}... $Y_{120\,160}$),(U_{11}... $U_{120\,160}$) and (V_{11}... $V_{120\,160}$) respectively, **wherein U and V data are not all sent.** Therefore, it is possible to start processing the received digital color information for reconstruction and display(see figures 2, 3, 4, column 1, lines 28-52, column 2, lines 42-67, column 4, lines 10-23). However, those references fail to teach a bit block transfer engine for performing a replicating function. Reference Selwan et al.discloses an apparatus/method for performing run length tagging by the use of BITBLT circuit (1106), BITBLT tag generation circuit block (1202), FIFO controller (1220) sending a signal on bus (1228) to alert display memory controller (1210) to stop loading data at FIFO full condition.

It would have been obvious to a person of ordinary skilled in the art at the time of the invention to utilize the aforementioned means and method of the apparatus of Hancock, apply the teaching principle of PCI interface means, utilize the Register Programming sequencer including address pointers and registers for memory control, PCI configuration registers available for programming(e.g. memory aperture predetermination) and also writing means to display buffers, the principle of decimation, byte alignment(offset) as taught by Munson et al., implement that offset teaching principle to memory address(bit level or byte level), then further apply the method of data conversion of YUV9 data into sequential packed data streams(in byte lanes) as taught by Coelho et al. , add a bit block transfer engine for data replication featuring an output signal(coupling to the aforementioned PCI interface) alerting system CPU after FIFO is full or the end of contiguous memory block is reached, as taught by Selwan et al. to obtain the combined device and associated method of Hancock-Munson et al.-Coelho et al.-Selwan et al. because it would result in reduction of significant reception time, reduction of buffer storage requirement as taught by Coelho et al.(see column 1, lines 65-67, column 2, lines 6-9), reduction of host processor utilization as taught by Munson et al.(see column 4, lines 5-6), reduction of memory access(during critical refresh process) and power consumption, and a more responsive machine, as taught by Selwan et al.(see column 3, lines 14-16, and column 24, lines 22-27).

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis Nguyen whose telephone number is (703) 308-8858. The examiner can normally be reached on weekdays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Group is (703) 308-9051.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

FN

Francis Nguyen

April 22nd, 1999

RICHARD A. HJERPE
SUPERVISORY PATENT EXAMINER
GROUP 2700